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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,983	08/30/2001	Paul A. Farrar	1303.018US1	1908
21186	7590	01/20/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH 1600 TCF TOWER 121 SOUTH EIGHT STREET MINNEAPOLIS, MN 55402			RACHUBA, MAURINA T	
			ART UNIT	PAPER NUMBER
			3723	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary

Application No.

09/944,983

Applicant(s)

FARRAR, PAUL A.

Examiner

M Rachuba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 14-21, 24-77 and 79-92 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14-21, 24-77 and 79-92 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04 November 2005 has been entered.

Election/Restrictions

2. Applicant's election without traverse of species 1 in the reply filed on 09 September 2003 is acknowledged. Based on newly cited patent US006419443B2 the election of species is withdrawn, and all the pending claims are treated on the merits below.

Allowable Subject Matter

3. The indicated allowability of claims 26-32 is withdrawn in view of the newly discovered reference(s) to US006419443B2. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 90-92 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 90 recites the limitation "the wafer" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-9, 14, 16, 18-21, 24, 25, 33-43, 45-77, 79-81 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Takenoshita et al, US006419443B2.
- Please refer to figures 1-6 and their descriptions. Figure 6 shows the platen moving past the rotating tool, the tool rotating in a direction to throw debris on a previously polished area of the wafer.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 10, 15, 26-32, 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Takenoshita et al, '443 in view of Moriyasu et al, US006126523A. '443 does not disclose that the dressing device is a finely tuned laser beam. '523, column 1, lines 35-39, teaches that it is old and well known to dress abrasive tools using a finely tuned laser beam. It would have been obvious to one of ordinary skill to have provided '443 with the laser beam dressing tool disclosed by '523, to allow precise control and cleaner working conditions.

11. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takenoshita et al, '443 in view of Wolff et al, 4,486,826. '443, while disclosing a controller (the various drive mechanisms) as broadly claimed, does not disclose the details as set forth in claim 44. '826, in a computer peripheral control apparatus, teaches that it is old and well known to provide a controller with an electronic system comprising a control unit, a processor coupled to the control unit, a memory coupled to the control unit and the processor, and input/output devices coupled to the control unit and the processor. It would have been obvious to one of ordinary skill to have provided '443 with the controller of '826, column 3 lines 30 through column 8 lines 40, to more efficiently control the various parts of the device.

12. Claims 82 and 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koos et al US005934980A in view of Takenoshita et al, '443. '980 discloses polishing a glass substrate, then performing a semiconductor fabrication process on the substrate, see column 1, lines 20-25. '980 does not disclose polishing the substrate by rotating a drum and creating a linear movement between the drum and substrate while

moving the substrate with respect to the drum in a direction to throw debris in a direction towards a previously processed portion of the wafer. '443, in a similar device, teaches that it is old and well known to polish a substrate by rotating a drum and creating a linear movement between the drum and substrate while moving the substrate with respect to the drum in a direction to throw debris in a direction towards a previously processed portion of the wafer. It would have been obvious to one of ordinary skill to have provided, '980 with the polishing process taught by '443, figures 1-6 and their descriptions, to prevent damage to the workpiece.

13. Claims 83-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koos et al '980 in view of Takenoshita et al, '443 as applied to claim 82 above, and further in view of Yano et al, US005483568A. '980 as modified by '443 does not disclose the process of determining whether the substrate is to be polished again, and polishing the substrate again; or upon determining that the wafer is to be polished again, determining whether the polishing pad drum is to be dressed; or upon determining that the drum is to be dressed, dressing the polishing pad drum prior to polishing the wafer again; or determining whether another semiconductor fabrication process is to be performed; and upon determining that another semiconductor fabrication process is to be performed, performing another semiconductor fabrication process, and determining whether the substrate is to be polished again. '980 as modified by '443 does disclose dressing the tool between each polishing process. '568, column 1, lines 32 through column 2, lines 14, teaches that it is old and well known to polish a substrate, check the substrate, and repolish if required; or to provide a plurality

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of fabrication processes, and to polish the substrate after. It would have been obvious to one of ordinary skill to have provided '980 as modified by '443 with any of the processes of polishing a substrate, checking the substrate, and repolishing if required; or providing a plurality of fabrication processes, and polishing the substrate after, as taught by '568, column 1, lines 32 through column 2, lines 14, to monitor and maintain wafer planarization.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M Rachuba whose telephone number is 571-272-4493. The examiner can normally be reached on Monday-Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M Rachuba
Primary Examiner
Art Unit 3723

